Comparisons of Job Characteristics

Focus Occupation: Aerospace Engineering and Operations Technicians (17-3021)
Associated Occupation: Aerospace Engineers (17-2011)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 82

Focus Occupation: Aerospace Engineering and Operations Technicians (17-3021)
Associated Occupation: Aerospace Engineers (17-2011)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	21.4	23.6	>	Current knowledge level is likely sufficient
Design	5.2	19.5	12.2	<<	Extensive education and/or training may be required
Physics	4.3	18.7	9.7	<<	Extensive education and/or training may be required
Mechanical	6.8	18.3	17.3	0	Current knowledge level may be sufficient
Mathematics	9.2	18.0	11.2	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	15.6	17.3	>	Current knowledge level is likely sufficient
Production and Processing	6.0	11.6	13.2	>	Current knowledge level is likely sufficient
Transportation	4.6	7.7	4.9	<<	Extensive education and/or training may be required
Telecommunications	3.9	7.0	6.6	0	Current knowledge level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 52

Focus Occupation: Aerospace Engineering and Operations Technicians (17-3021)
Associated Occupation: Aerospace Engineers (17-2011)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Reading Comprehension	10.7	16.0	11.1	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	15.8	6.8	<<	Extensive development of skills in this area may be required

Science	4.5	15.3	9.7	<<	Extensive development of skills in this area may be required
Critical Thinking	10.8	15.2	12.3	<	A higher skill level may be required
Mathematics	6.2	13.9	6.7	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	13.5	10.6	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	11.0	11.1	0	Current skill level may be sufficient
Systems Analysis	6.5	11.0	7.3	<<	Extensive development of skills in this area may be required
Technology Design	2.6	9.7	3.5	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 91

Focus Occupation: Aerospace Engineering and Operations Technicians (17-3021)
Associated Occupation: Aerospace Engineers (17-2011)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Written Comprehension	11.0	16.8	13.3	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	15.4	12.5	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	14.4	8.1	<<	Extensive improvement in abilities may be required
Written Expression	9.8	13.9	11.5	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	13.8	12.2	<	Some improvement in abilities may be required
Information Ordering	9.9	12.0	11.6	0	Current ability level may be sufficient
Fluency of Ideas	7.6	10.8	8.3	<<	Extensive improvement in abilities may be required
Number Facility	6.3	10.8	7.4	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 84

Focus Occupation: Aerospace Engineering and Operations Technicians (17-3021)
Associated Occupation: Aerospace Engineers (17-2011)

Work Activities	Exclusivity of Activity
Analyze engineering test data	71
Analyze technical data, designs, or preliminary specifications	47

Calculate engineering specifications	64
Communicate technical information	4
Conduct performance testing	66
Confer with engineering, technical or manufacturing personnel	25
Develop or maintain databases	30
Develop plans for programs or projects	31
Draw prototypes, plans, or maps to scale	57
Evaluate engineering data	60
Examine engineering documents for completeness or accuracy	62
Explain complex mathematical information	30
Improve test devices or techniques in manufacturing, industrial or engineering setting	75
Inspect facilities or equipment for regulatory compliance	51
Maintain records, reports, or files	5
Prepare technical reports or related documentation	22
Read blueprints	10
Read schematics	34
Read technical drawings	7
Test equipment as part of engineering projects or processes	67
Understand engineering data or reports	48
Use computers to enter, access or retrieve data	3
Use drafting or mechanical drawing techniques	50
Use electrical or electronic test devices or equipment	40
Use scientific research methodology	21
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 71

Focus Occupation: Aerospace Engineering and Operations Technicians (17-3021)
Associated Occupation: Aerospace Engineers (17-2011)

Tools and Technologies	Exclusivity
Business function specific software	1
Computers	1
Content authoring and editing software	1
Electrical measuring and testing equipment	7
Indicating and recording instruments	2
Industry specific software	1
Length and thickness and distance measuring instruments	2
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Metals and metallurgy and structural materials testing instruments	15

Non destructive examination equipment	13
Pneumatic tools	8
Power tools	2
Pressure measuring and control instruments	10
Soldering and brazing and welding machinery and supplies	6
Spectroscopic equipment	10
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.